Technical Data Sheet

BV421 Mouse Anti-Mouse RORγt

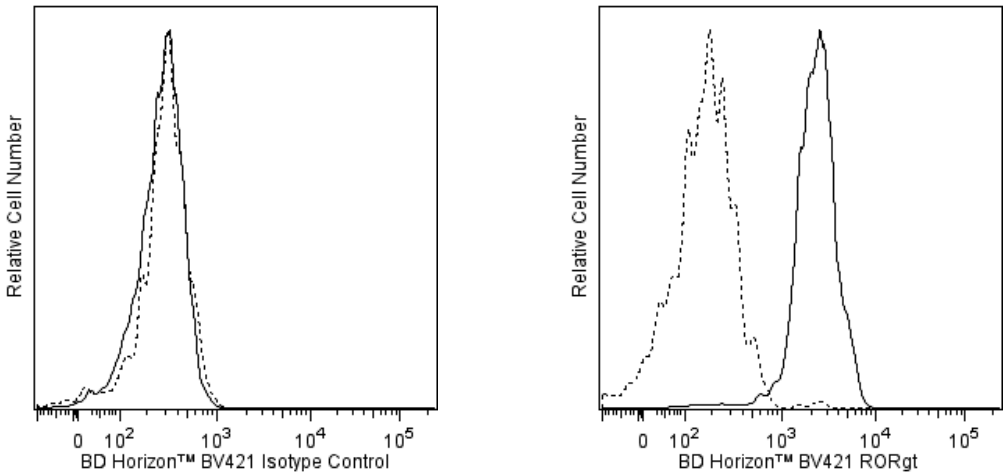
Product Information

Material Number:	**562894**
Alternate Name:	RORγT; RORgt; RORgamma t; RORgammaT; Rorc2; Rorg; TOR; Thor; Nr1f3
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	Q31-378
Immunogen:	Mouse RORγt Recombinant Protein
Isotype:	Mouse IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The Q31-378 monoclonal antibody recognizes mouse RORgamma t (RORγt), an isoform of RORgamma (RORγ). RORγt is a DNA-binding transcription factor that belongs to the ROR/RZR orphan nuclear receptor family. RORγt is expressed exclusively by lymphoid cells including CD4+CD8+ thymocytes, peripheral CD4+ Th17 and CD8+ Tc17 cells, NKT cells and innate lymphoid cells such as lymphoid tissue inducer (LTi) cells. RORγt plays essential roles in thymopoiesis, T cell homeostasis, differentiation of effector T lymphocytes and the development of secondary lymphoid tissues including lymph nodes and Peyer's patches.

The antibody was conjugated to Brilliant Violet™ 421 and has been developed in collaboration with Sirigen. With an Ex Max of 407-nm and Em Max at 421-nm, Brilliant Violet™ 421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). Brilliant Violet™ 421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue™ conjugates.



Multicolor flow cytometric analysis of RORγt expression in mouse thymocytes. *BALB/c mouse thymocytes were stained with APC Rat Anti-Mouse CD4 (Cat. No. 553051/561091) and FITC Rat Anti-Mouse CD8a (Cat. No. 553031/553030/561966) antibodies, and then fixed and permeabilized using the BD Pharmingen™ Transcription Factor Buffer Set (Cat. No. 562574/562725). The fixed and permeabilized cells were then stained with either BD Horizon™ BV421 Mouse IgG2a, κ Isotype Control (Cat. No. 562439) or BD Horizon™ BV421 Mouse Anti-Mouse RORγt antibody (Cat. No. 562894). The overlapping histograms show the levels of IgG2a Isotype Control (Left Panel) and RORγt (Right Panel) staining in CD4+ CD8- single-positive (dashed line histogram) or CD4+ CD8+ double-positive (solid line histogram) thymocytes. The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of intact cells. Flow cytometry was performed using a BD™ LSR II Flow Cytometry System.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

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Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562439	BV421 Mouse IgG2a, k Isotype Control	50 µg	G155-178
562574	Transcription Factor Buffer Set	100 tests	(none)
562725	Transcription Factor Buffer Set	25 tests	(none)
553051	APC Rat Anti-Mouse CD4	0.1 mg	RM4-5
561091	APC Rat Anti-Mouse CD4	25 µg	RM4-5
553031	FITC Rat Anti-Mouse CD8a	0.5 mg	53-6.7
553030	FITC Rat Anti-Mouse CD8a	0.1 mg	53-6.7
561966	FITC Rat Anti-Mouse CD8a	25 µg	53-6.7

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Brilliant Violet™ 421 is a trademark of Sirigen.
4. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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